



Michigan's
Nonpoint Source
Program

Federal Clean Water Act Section 319 Grant

Tracking code 2012-0030



Kalamazoo River Watershed Council

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Kalamazoo River Watershed Management Plan Implementation Project

December 2012 - March 2016

Stormwater education and technical assistance were the primary focus of this 319 implementation project. The Kalamazoo River Watershed Council (KRWC) led efforts that built upon our earlier work developing a watershed management plan (WMP) for the Kalamazoo River Watershed. A major impairment in the watershed is eutrophication and associated algal blooms and low dissolved oxygen in reservoirs during warm summer months. The WMP and other modeling studies have identified stormwater runoff from urban areas as a major source of phosphorus to the river. This project leveraged the work of many municipalities to reduce phosphorus and other pollutant loading to the river by implementing stormwater management plans and policies and developing a wetland protection and restoration outreach strategy.

Grant Amount: \$ 177,200

Match Funds: \$ 65,300

Total Amount: \$ 242,500

Best Management Practices:

Technical assistance with stormwater management planning for local units of government in the Kalamazoo River watershed resulted in:

- Adoption of new stormwater ordinances and resolutions at 11 municipalities
- Implementation of stormwater management plans at 12 municipalities

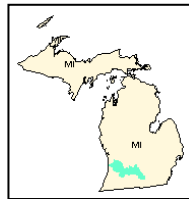
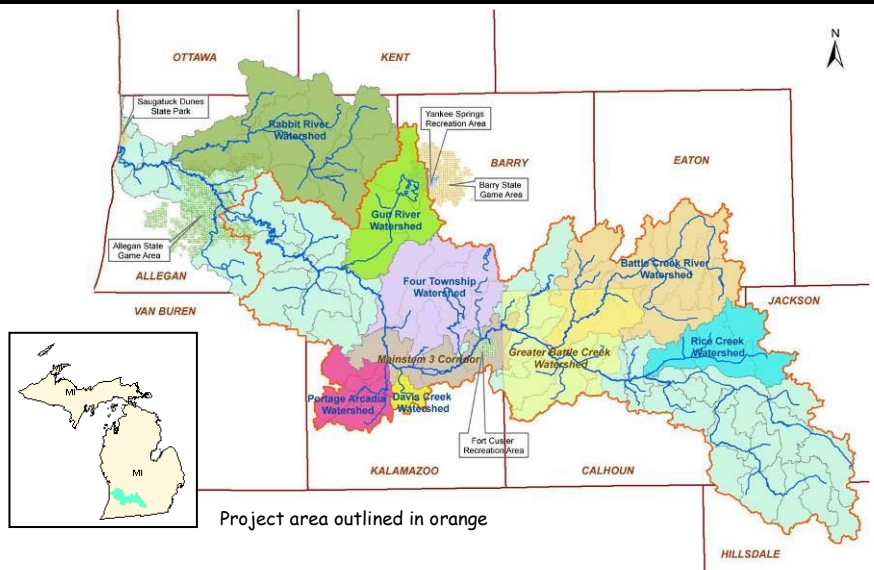


Estimated Annual Load Reductions:

- 860 pounds of phosphorus per year
- 95 tons of sediment per year
- 6,190 pounds of nitrogen per year

I&E Activities:

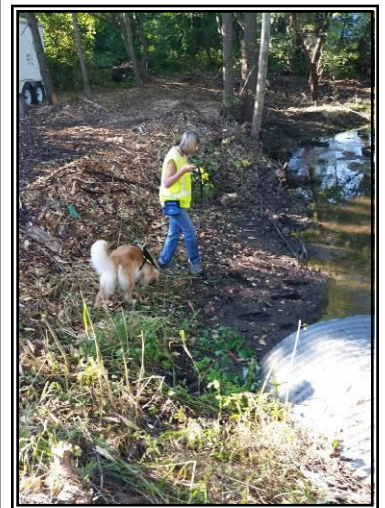
- Presented stormwater education materials to 13 local units of government
- Trained over 60 municipal employees on municipal stormwater BMPs
- Created online public education campaign "Be RiverWise"
- Developed wetland protection and restoration prioritization dataset and an outreach strategy to landowners and municipalities.



Project area outlined in orange

Partners involved:

- TMDL Point Source and Implementation Joint Committee
- TMDL Point Source Signatories
- Office of the Kalamazoo Drain Commissioner
- Office of the Calhoun County Water Resources Commissioner
- Michigan DEQ
- Environmental Canine Services
- Van Buren Conservation District
- LKF Marketing
- Kalamazoo Nature Center
- MSU Kellogg Biological Station
- Four Townships Water Resources Council



E. coli source tracking investigation at Davis Creek.

April 29, 2016



Kenna the canine working with Environmental Canine Services, LLC to investigate potential human sources of *E. coli* to Davis Creek, a Kalamazoo River tributary. Sources are often inconspicuous seeps or pipe inflows that drain areas with leaking septic or sewer systems.



Kenna the canine would sit to alert her handler when she detected human sewage in the stream or in streamside seeps and inflows. She gave a positive alert at 22 of 37 sites that were tested from Davis Creek.